

ECFD Position Paper

CO₂ emission performance standards for new heavy-duty vehicles

August 2023

The European Confederation of Fuel Distributors (ECFD) is the umbrella organisation of the federations of fuel distributors in Austria, Belgium, France, Germany. We represent medium-sized companies that operate refuelling stations and trade and distribute fuels and heating oil to the final customers. The transition to meeting EU's climate targets and a reliable supply of CO₂-neutral fuels is one of the organisation's core concerns. ECFD therefore positions itself on the EU Commission's proposal for CO₂ emission standards for new heavy-duty vehicles.

At a glance

- Heavy goods road transport is the foundation of European trade: in the EU, over three quarters of all goods transported over land are carried by truck. At the same time, truck transport is responsible for over 21% of EU transport emissions.
- The CO₂ emission performance standards for heavy-duty vehicles set CO₂ emission limits that car manufacturers must meet. However, these CO₂ emissions are measured at the tailpipe - which only allows electric mobility and hydrogen engines as climate protection options.
- As a result, the regulation neglects the climate protection potential of renewable fuels. Wrongly so - because renewable fuels make green energy transportable and directly reduce CO₂ emissions. Since eFuels can be blended with conventional fuels and used in existing infrastructure, climate protection and resilient supply chains can go hand in hand.
- Consideration of renewable fuels in the revision of the CO₂ emission standards for heavy-duty vehicles is overdue and can be implemented through a carbon correction factor and a voluntary crediting system for renewable fuels.

General remarks

Road freight transport as the foundation of European trade of goods

Heavy-duty transport by road is indispensable for the movement of goods and products in Europe and the foundation of the European single market. Commercial vehicles ensure continuous logistics and thus the reliable supply for EU citizens, industry and trade. A full 77% of all goods transported overland in the European Union are carried by truck. At the same time, the more than 7 million trucks registered in the EU make a significant contribution of more than one fifth to the CO₂ emissions of the transport sector. These emissions must be reduced - with a transformation from fossil to non-fossil energy carriers.

The premise of technological openness remains necessary

Road transport is only at the beginning of the transformation to non-fossil energy sources. This transition must follow the premise of technological neutrality, keep an eye on affordability and consider holistic approaches with regard to CO₂ emissions.

It is clear that electromobility in road transport must make its contribution to reducing CO₂. However, there is already great uncertainty as to whether the politically targeted electrification is achievable and whether the criteria of reliability, availability and affordability can be met at the same time. This applies

to the production of renewable electricity as well as to the charging infrastructure. A recent [study](#) by Frontier Economics, for example, has already identified the high risk of an electricity gap using the example of Germany. This reality is often not perceived at the political level: In its impact assessment on CO₂ emission standards for new heavy-duty vehicles, the EU Commission assumed 82% renewable electricity supply on average across Europe from 2030 which is a hardly convincing assumption.

Whether the Europe-wide development of a renewable electricity supply will be successful remains open. Currently, there is effectively no public charging and hydrogen tank infrastructure for heavy-duty trucks. Further, the expansion targets set out in the Alternative Fuels Infrastructure Regulation will not be sufficient. The European Automobile Manufacturers Association ([ACEA](#)) therefore warns of a significant infrastructure gap that will make even the existing CO₂ reduction target of -30 % by 2030 unattainable.

The conclusion is therefore obvious: To maintain resilient logistics chains, all technological options must be made available. The significant contribution of CO₂-neutral fuels must finally be taken into account and thus has to be legally recognised in the CO₂ emission standards for new heavy-duty vehicles.

ECFD position on the proposal for CO₂ emission standards for heavy trucks

The EU Commission's proposed revision of the CO₂ fleet limits for heavy-duty vehicles envisages a 90% reduction in CO₂ emissions by 2040, with interim targets of 45% reduction by 2030 and 65% reduction by 2035.

However, the CO₂ emissions measured at the tailpipe of a vehicle are decisive. Thus, electric mobility and hydrogen propulsion systems would be the only climate protection options in road freight transport. According to the tailpipe emission logic, a battery-electric truck powered by fossil electricity always emits 0g CO₂ per tonne-kilometre, while a truck fuelled exclusively with CO₂-neutral fuels is attributed a fossil exhaust emission value. As early as 2013, a [study](#) by the Federal Environment Agency (UBA) came to the conclusion that such a sole consideration of tailpipe emissions is no longer appropriate.¹

Include life cycle analysis as the basis

This unequal consideration can be addressed with the help of a life cycle analysis (LCA), which takes into account all emissions and also negative emissions from the production, transport and use of energy sources. The use of indicators based on a life cycle analysis is [recommended](#) by the European Commission for the calculation of the CO₂ footprint.

The current Regulation [\(EU\)2019/1242](#) also states in recital 42 that "[i]t is important to assess the full life-cycle CO₂ emissions from heavy-duty vehicles at Union level" and includes the specific tasks to evaluate an inclusion of renewable fuels as well as a life-cycle approach in the revision of the regulation. Neither of these can be found in the current proposal. Instead, the argumentation of the impact assessment for the revision of the CO₂ fleet regulation for trucks refers exclusively to the total cost of ownership and rejects the inclusion of renewable fuels on the basis of this calculation. The data on which this calculation is based is hardly comprehensible due to the intransparency of the impact

¹ See Umweltbundesamt (2013) Konzept zur zukünftigen Beurteilung der Effizienz von Kraftfahrzeugen, p. 10: "*Vehicle propulsion utilising electric or hydrogen fuel sources shifts CO₂ emissions in their entirety from the exhaust to the energy generation stage. Thus, evaluation of these so-called zero-emissions vehicles on the grounds of their direct CO₂ emissions has little meaning.*"

assessment, which renders the comparison between the different drive options meaningless. Renewable fuels are wrongly excluded despite their climate protection potential.

The holistic consideration of processes, products and policies is a guiding principle of the EU. For example, the LCA consideration of fuels is already given through legal texts such as the Renewable Energy Directive III. ECFD therefore calls for the "well-to-wheel" consideration of the energy supply as a swift first step. The "well-to-wheel" approach is already reflected in other dossiers within the Fit for 55 package, such as FuelEU Maritime, the EU regulation on the promotion of alternative fuels in shipping, or the recent proposal for a uniform calculation of transport emissions in 'CountEmissionsEU' proposal. **With a regulation that assesses the CO₂ footprint based on tailpipe emissions and neglects the origin of the energy used, the EU is missing its chance for a targeted and environmentally friendly climate policy in the transport sector.**

In addition, the distribution of the infrastructure plays a major role: For smooth, EU-wide supply chains, sufficient megawatt charging stations and hydrogen filling stations must be built in all member countries. The [charging infrastructure](#) for passenger cars already shows the uneven geographical distribution of infrastructure, with half of all charging points concentrated in just two countries. The infrastructure build-up and especially the additional burden on the electricity grids pose major challenges for the EU member states and risk leaving less financially strong countries behind in this transition - making cross-border freight transport in the EU much more difficult. In the interest of consumers and also climate protection, a technology-open solution must be found instead. Renewable fuels can ensure that climate protection can be prioritised in all EU member states through fuel blending and using existing infrastructure, without jeopardising European connectivity.

Inclusion of renewable fuels in the revision

For these reasons, ECFD urges the consideration of renewable fuels in the revision of the regulation for CO₂ emission performance standards for new heavy-duty vehicles. More than 90 associations and companies as well as over 120 scientists had already called for this in a [joint statement](#).

Such a consideration can be achieved through two mechanisms: A carbon correction factor and a voluntary crediting system for renewable fuels. These options can be implemented individually as well as complementary to each other.

Introduction of a CO₂ correction factor

The **CO₂ correction factor (CCF) reflects the share of renewable fuels in the current fuel mix** and thus replaces the 100% fossil fuel assumed in the regulation with the real fuel mix containing shares of renewable fuels (see Figure 1): Renewable fuels, currently primarily biofuels, are already being brought onto the market via the obligations of the Renewable Energy Directive (RED). These must meet a CO₂ reduction of at least 70% compared to fossil fuels and thus reduce the emission intensity of the overall fuel mix. The data on the blending of renewable fuels are collected via the SHARES tool of the European Environment Agency (EEA) and are thus available as a reliable basis. Such a solution reflects the fact that, in addition to technical optimisations of the drive system, the energy mix used is decisive for the CO₂ emissions of a vehicle. The importance for truck manufacturers increases even more in view of the foreseeable increase in demand for bio-based fuels (e.g. hydrogenated vegetable oils (HVO)). ECFD further underlines that an artificial maximum limit of the CCF proposed in amendments, e.g. to 10% of the specific emission value as proposed in some amendments, is not appropriate here and neglects the great leverage of sustainable fuels for achieving the European climate targets.

ECFD therefore appeals to the representatives of the Member States as well as the Members of the EU Parliament, in particular the lead Environment Committee (ENVI) and the opinion-giving Transport

(TRAN) and Industry (ITRE) Committees, to vote in favour of the necessary amendments to the legislative proposal to introduce a CCF.

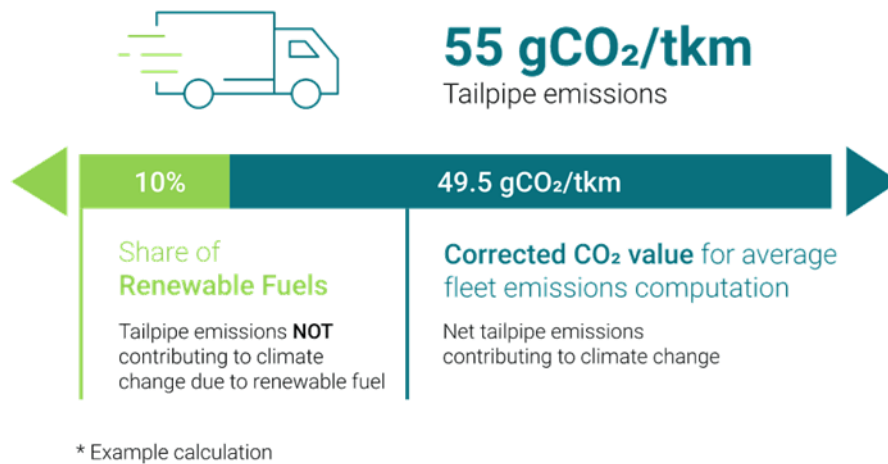


Figure 1: Functioning of a carbon correction factor that takes into account the share of renewable fuels in the calculation of a truck's tailpipe emissions; source: www.renewable-fuels-for-trucks.eu

Voluntary crediting system for renewable fuels

The inclusion of the CO₂ correction factor ensures better transparency of the actual CO₂ emissions of heavy-duty trucks and buses. However, the fundamental goal of the revision of this regulation within the framework of the Fit for 55 package is to reduce emissions in heavy-duty transport. This requires additional quantities of CO₂-neutral fuels.

The revision of the regulation should therefore include a methodology to take into account the contribution of the use of renewable fuels in complying with the CO₂ emission standards of new heavy-duty trucks. This can be achieved through a voluntary crediting system: It would allow truck manufacturers to reduce their CO₂ emissions through additional renewable fuels placed on the market and thus avoid the risk of missing targets and facing significant penalties.

In such a crediting system, fuel suppliers could bring renewable fuels into the market beyond the legal obligations of the Renewable Energy Directive and receive credits for doing so. These credits can be purchased by truck manufacturers to account the corresponding CO₂ savings towards their fleet limits (see Figure 2). Such a **flexible and voluntary system stimulates additional volumes of renewable fuels and can thus significantly accelerate the defossilisation of the transport sector**. Truck manufacturers would thus be given an additional option besides the sale of alternative drives to reduce their CO₂ emissions - especially in cases where sales of battery or hydrogen powered trucks fall short of expectations and the necessary charging and fuelling infrastructure is not adequately available.

The specific wording of the legal provisions for the practical implementation is available: in 2020, for example, [Frontier Economics](#) was commissioned by the Federal Ministry for Economic Affairs and Energy (BMWi) to develop a regulatory approach for passenger cars that can be adapted to the CO₂ emission standards for trucks. By using already existing monitoring and reporting mechanisms of the Renewable Energy Directive, a crediting system can be implemented without significant regulatory burden.

The system would significantly advance the defossilisation of the existing vehicle fleet. It would also prevent the disruption of logistics chains for goods or components and thus the supply of products to citizens thus contributing to a comprehensive resilience.

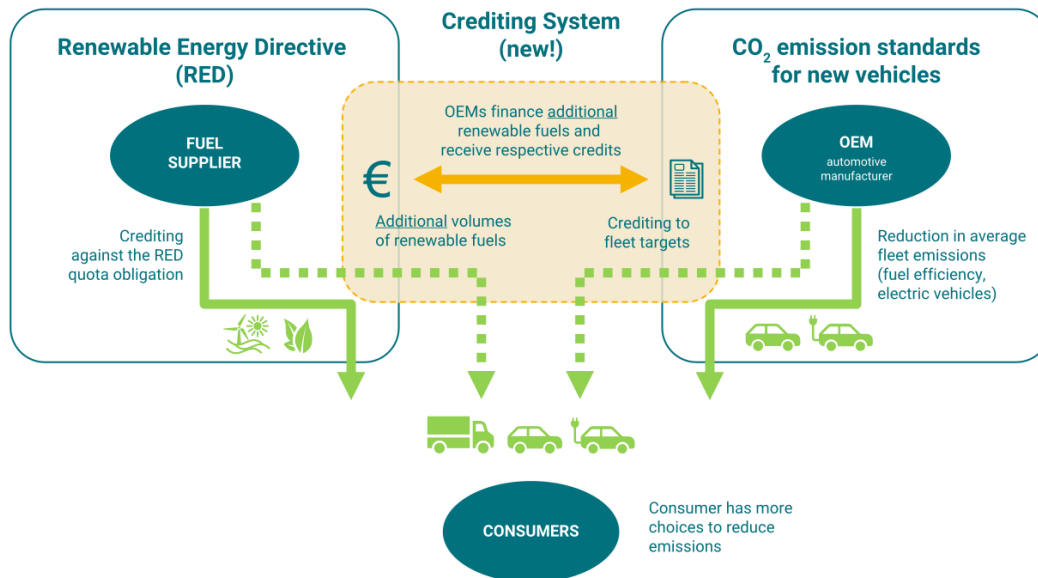


Figure 2: Functioning of a voluntary crediting system in which fuel suppliers receive credits for additional renewable fuels that can be purchased by truck manufacturers for crediting against their fleet limits; source: www.renewable-fuels-for-trucks.eu

Conclusion: Sustainable transformation while safeguarding prosperity and employment

The current focus of the Commission proposal is too one-sided on only one or two technologies. The transformation of passenger and freight transport requires great efforts and investments, for example in sustainable material flows and the sufficient provision of renewable energy, and cannot be limited to vehicle manufacturers alone. Instead, a transformation of the entire energy system is required, in which all energy sources must be defossilised: A comprehensive [study](#) by FVV Frankfurt has already demonstrated for the passenger car sector in 2022 that the transition to CO₂ neutrality with fuel consideration can be achieved much faster than with an isolated focus on tailpipe emissions. Moreover, solutions are needed that work reliably everywhere in Europe and worldwide - regardless of a country's income level, economic power, geographical conditions and level of technical equipment. It is clear that electric and hydrogen mobility must contribute to freight logistic's CO₂-reduction. However, without CO₂-neutral fuels based on sustainable biogenic and electricity-based sources neither the achievement of climate targets nor the reliable supply of the economy and the population can be ensured.

The upcoming debates and votes of Council and Parliament on the revision of CO₂ emission standards for trucks should therefore be urgently used to **overcome the outdated regulatory approach of separating vehicle efficiency from the fuel side**. Only in this way can a successful transformation towards achieving the climate goals succeed without disadvantages for prosperity and employment.